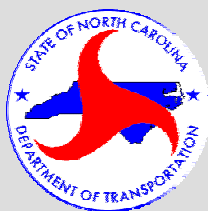


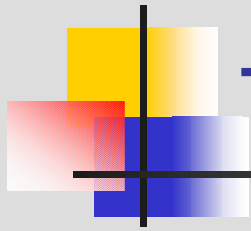
Timing Maintenance

Traffic Engineering Conference

September 9, 2004

Larry D. Young

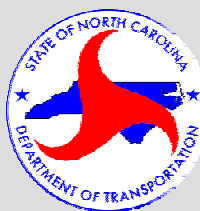


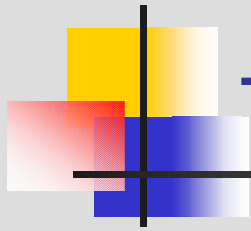


Timing Maintenance

Variation in Improvements

- Little benefit when existing timing plans performed well
- Largest savings were obtained on arterials, rather than signalized grid networks
- High volume systems with predominately through movements achieved the greatest results
- Systems with actuated signals achieved the greater benefits

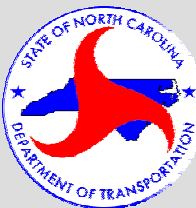




Timing Maintenance

Schedule D

- Timing plans are evaluated on intervals of no greater than 18 months
- On the average, required new timing plans are developed and implemented within six months
- Corridors with significant growth in traffic ($>5.0\%$), new timing plans are developed and implemented annually
- Timing plans for newly installed intersections are implemented within 30 days



NB**Legend:**

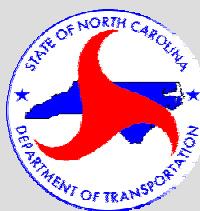
ET	Elapsed Time since beginning of Run until Crossing Time (seconds)
TT	Travel Time from previous Node (seconds)
Delay	Delay in Travel Time from previous Node based on user-specified average Speed (seconds)
CD	Cumulative Delay since beginning of Run (seconds)
Stops	Number of Stops in Travel from previous Node
CStops	Cumulative Number of Stops in Run

Before**AVERAGES**

Node	ET	TT	Delay	CD	Stops	CStops
NC 41	28	28	16	16	1	1
E. Southerland St.	57	29	21	37	1	2
Murray Dr.	71	14	7	44	0	2
Wal-Mart Ent.	120	49	9	53	0	2
Town & Country Shpg Cntr	156	36	1	53	0	2

After**AVERAGES**

Node	ET	TT	Delay	CD	Stops	CStops
NC 41	18	18	6	6	0	0
E. Southerland St.	27	10	2	8	0	0
Murray Dr.	36	8	1	9	0	0
Wal-Mart Ent.	76	40	0	9	0	0
Town & Country Shpg Cntr	112	35	0	9	0	0



SB

Legend:

ET	Elapsed Time since beginning of Run until Crossing Time (seconds)
TT	Travel Time from previous Node (seconds)
Delay	Delay in Travel Time from previous Node based on user-specified average Speed (seconds)
CD	Cumulative Delay since beginning of Run (seconds)
Stops	Number of Stops in Travel from previous Node
CStops	Cumulative Number of Stops in Run

Before

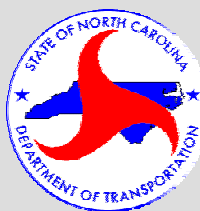
AVERAGES

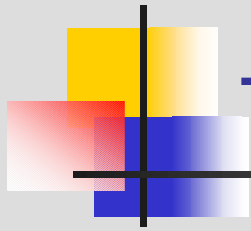
Node	ET	TT	Delay	CD	StopD	CStopD
Town & Country Shpg Cntr	13	13	0	0	0	0
Wal-Mart Ent.	49	36	0	1	0	0
Murray Dr.	104	56	15	16	1	1
E. Southerland St.	127	23	15	31	1	2
NC 41	138	11	3	34	0	2

After

AVERAGES

Node	ET	TT	Delay	CD	Stops	CStops
Town & Country Shpg Cntr	15	15	2	2	0	0
Wal-Mart Ent.	61	46	10	13	1	1
Murray Dr.	104	43	3	16	0	1
E. Southerland St.	114	10	2	18	0	1
NC 41	123	9	1	19	0	1





Timing Maintenance

Be Involved in Field Implementation

- On-the-job training
- Input into timing plans
- Time of day vs. Traffic Responsive

